

## **DETAILED ACTION**

### **Examiner's Amendment**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Hyung N. Sohn, **Reg. No. 44,346 on 10/28/2011.**

**Claims 1-21 and 27 are canceled**

**Claims 22 and 28 has been amended as follows:**

22. (Currently amended) A method for managing resources in a communication system having resources shared by at least two operators, comprising:
  - receiving an access request for a first operator of the at least two operators;
  - executing a first determination whether there are sufficient amount of free resources shared by the at least two operators available in the communication system;
  - executing a second determination whether a total amount of said resources shared by the at least two operators in use in the communication system exceeds a first threshold;
  - executing a third determination whether a total amount of said resources shared by the at least two operators in use for the first operator exceeds a second threshold; and
  - deciding on accepting the access request based on the results of the first, second and third determinations,

wherein the act of executing the third determination is performed only if the second determination shows that the total amount of resources shared by the at least two operators in use in the communication system exceeds the first threshold.

28. (Currently amended) A method according to claim ~~27~~ 23, wherein the access request is accepted if the third determination shows that the total amount of resources shared by the at least two operators in use for the first operator does not exceed the second threshold.

**Add new claims 47-65.**

47. (New) A method for managing resources in a communication system having resources shared by at least two operators, comprising:  
receiving an access request for a first operator of the at least two operators;  
executing a first determination whether there are sufficient amount of free resources shared by the at least two operators available in the communication system;  
executing a second determination whether a total amount of said resources shared by the at least two operators in use in the communication system exceeds a first threshold;  
executing a third determination whether a total amount of said resources shared by the at least two operators in use for the first operator exceeds a second threshold;  
deciding on accepting the access request based on the results of the first, second and third determinations; and

evaluating a priority of the access request if the first determination shows that there are not sufficient free resources shared by the at least two operators available in the communication system or if the third determination shows that the total amount of resources shared by the at least two operators in use for the first operator exceeds the second threshold.

48. (New) A method according to claim 47, wherein the act of executing the second determination is performed only if the first determination shows that there are sufficient free resources shared by the at least two operators available in the communication system.

49. (New) A method according to claim 47, wherein the access request is accepted if the second determination shows that the total amount of resources shared by the at least two operators in use in the communication system does not exceed the first threshold.

50. (New) A method according to claim 47, further comprising the act of size discrimination based on the capacity requested by the incoming connection dependent on the total amount of resources shared by the at least two operators in use in the communication system if the second determination shows that the total amount of resources shared by the at least two operators in use in the communication system does not exceed the first threshold.

51. (New) A method according to claim 50, wherein the size discrimination comprises: determination of a threshold class dependent on the total amount of resources shared by the at least two operators in use in the communication system;

comparing an amount of resources required by the access request with a maximum accepted size associated with the determined threshold class;  
accepting the access request if the amount of resources required by the access request is smaller than or equal to the maximum accepted size; and  
rejecting the access request if the amount of resources required by the access request is larger than the maximum accepted size.

52. (New) A method according to claim 48, wherein the act of executing the third determination is performed only if the second determination shows that the total amount of resources shared by the at least two operators in use in the communication system exceeds the first threshold.

53. (New) A method according to claim 52, wherein the access request is accepted if the third determination shows that the total amount of resources shared by the at least two operators in use for the first operator does not exceed the second threshold.

54. (New) A method according to claim 47, wherein the first threshold is equal to a pre-determined congestion threshold of the shared by the at least two operators.

55. (New) A method according to claim 47, wherein the first threshold is equal to a pre-determined congestion threshold of the shared by the at least two operators minus the amount of resources required by the access request.

56. (New) A method according to claim 47, wherein the second threshold is equal to a pre-determined portion of the total resources shared by the at least two operators allocated to the first operator.

57. (New) A method according to claim 47, wherein the second threshold is equal to a pre-determined portion of the total resources shared by the at least two operators allocated to the first operator minus the amount of resources required by the access request.

58. (New) A method according to claim 47, further comprising the act of storing a respective measure of the fraction of resources shared by the at least two operators currently in use by each of said at least two operators, said measure for the first operator being updated upon accepting the access request or when an already established connection for the first operator is terminated.

59. (New) A method according to claim 58, further comprising updating the respective measures by means of resource utilisation information from an external source.

60. (New) A method according to claim 47, wherein the access request is rejected if the first determination shows that there are not sufficient free resources shared by the at least two operators available in the communication system or if the third determination shows that the total

amount of resources shared by the at least two operators in use for the first operator exceeds the second threshold.

61. (New) A method according to claim 47, wherein the act of evaluating the priority comprises:

executing a fourth determination whether the sum of the free resources shared by the at least two operators available in the communication system and a total amount of resources shared by the at least two operators being occupied by traffic having a lower priority than the priority of the access request for the first operator is smaller than the amount of resources required for the access request for the first operator;

rejecting the access request if the fourth determination shows that the sum of the free resources shared by the at least two operators available in the communication system and the total amount of resources shared by the at least two operators being occupied by traffic having a lower priority than the priority of the access request for the first operator is smaller than the amount of resources required for the access request for the first operator; and

pre-empting on-going traffic sufficient to allow the access request for the first operator if the fourth determination shows that the sum of the free resources shared by the at least two operators available in the communication system and the total amount of resources shared by the at least two operators being occupied by traffic having a lower priority than the priority of the access request for the first operator is equal to or larger than the amount of resources required for the access request for the first operator, and accepting the access request.

62. (New) A method according to claim 61, wherein the act of pre-empting in turn comprises:

    determining which operator of the at least two operators presently being in most excess of its target resource utilisation;

    selecting a connection of the operator of the at least two operators presently being in most excess of its target resource utilisation having a lower priority than the priority of the access request for the first operator;

    releasing the selected connection;

    determining whether the resources required for the access request is larger than the free resources shared by the at least two operators available in the communication system; and

    repeating the previous acts if the resources required for the access request is larger than the free resources shared by the at least two operators available in the communication system.

63. (New) A method according to claim 47, wherein the act of receiving an access request for the first operator in turn comprises:

    receiving a renegotiation request for an ongoing call from the first operator;

    providing a supplementary access request for the first operator having an access request size corresponding to the difference between a requested size and a present size of the ongoing call, if the requested size is larger than the present size; and

    performing a change of resource utilisation for the ongoing call, if the present size is larger than the requested size.

64. (New) A method of claim 47, wherein the acts of executing the first determination, executing the second determination, executing the third determination, and deciding on accepting the access request are performed by a node of the communication system.

65. (New) A method of claim 47, wherein the second threshold is related to an agreed proportion of resources shared by the at least two operators for use by the first operator.

### **Allowable Subject Matter**

2. **Claims 22-26 and 28-65** are allowed.

3. The following is an examiner's statement of reasons for allowance:

The prior art record, considered individually or in combination, appears to fail to fairly show or suggest a claimed invention comprising, among other limitations; receiving an access request for a first operator of the at least two operators; executing a first determination whether there are sufficient amount of free resources shared by the at least two operators available in the communication system; executing a second determination whether a total amount of said resources shared by the at least two operators in use in the communication system exceeds a first threshold; executing a third determination whether a total amount of said resources shared by the at least two operators in use for the first operator exceeds a second threshold; and deciding on accepting the access request based on the results of the first, second and third determinations,

wherein the act of executing the third determination is performed only if the second determination shows that the total amount of resources shared by the at least two operators in use in the communication system exceeds the first threshold.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AWET HAILE whose telephone number is (571)270-3114. The examiner can normally be reached on Monday through Friday 8:30 AM - 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Aung Moe can be reached on (571)272-7314. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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